

Listing of Claims

1. (Currently Amended) A method for a gain control of a fiberoptic repeating system comprising:

mixing from a master repeater a locally generated modulated MODEM signal of a prescribed level with a RF signal and transmitting the mixed signal through an optical cable;

detecting at a slave repeater a modulated MODEM signal level from the mixed signal transmitted by the master repeater;

comparing, at the slave repeater, the detected modulated MODEM signal level with a reference level and obtaining a difference between the levels, wherein the reference level is the prescribed level unless the master repeater transmits a control signal of a base station; and

adjusting a gain of an amplifier for the RF signal in the slave repeater by using the obtained difference to calculate the gain adjustment, wherein the modulated MODEM signal is generated independently from the RF signal.

2. (Original) A method of claim 1, wherein the modulated MODEM signal is detected by a controller of a slave repeater.

3. (Cancelled)

4. (Previously Presented) A method of claim 1, wherein controlling the gain of the amplifier comprises increasing a level of the RF signal by the obtained difference.

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5. (Currently Amended) A method for a fiberoptic repeating system comprising:

- receiving from a base station a first RF signal;
- amplifying the first RF signal by a constant level through an amplifier of a master repeater;
- mixing a locally generated first modulated MODEM signal of a prescribed level with the first amplified RF signal and transmitting the mixed signal through an optical cable to a slave repeater;
- receiving and separating the mixed signal into a second modulated MODEM signal and a second RF signal, and detecting a modulated MODEM signal level from the second modulated MODEM signal;
- comparing, at the slave repeater, the modulated MODEM signal level with a reference level and obtaining a difference between the levels, wherein the reference level is the prescribed level unless the master repeater transmits a control signal of [[a]] the base station;
- controlling a gain of an amplifier for the RF signal in the slave repeater based upon said obtained difference; and

amplifying the second RF signal according to the controlled gain and transmitting the second amplified RF signal to terminal, wherein the first modulated MODEM signal is generate independently from the RF signal.

6. (Previously Presented) A method of claim 5, wherein the modulate MODEM signal level is detected by a controller of the slave repeater.

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7. (Cancelled)

8 (Previously Presented) A method of claim 5, wherein controlling the gain of the amplifier for the RF signal in the slave repeater comprises increasing a level of the second RF signal by the obtained difference.

9. (Currently Amended) A method of controlling gain in a fiberoptic communication system, comprising:

combining a locally generated monitoring signal of a predetermined prescribed level with an RF signal, wherein the monitoring signal of a prescribed level comprises a modulated gain control signal;

transmitting the combined monitoring and RF signals to a slave repeater;

receiving and separating the transmitted monitoring signal from the transmitted RF signal at the slave repeater;

comparing, at the slave repeater, a level of the received monitoring signal with the prescribed level; and

adjusting a gain applied to the received RF signal by using a result of the comparison to calculate the gain adjustment, wherein the monitoring signal is generated independently from the RF signal.

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10. (Cancelled)

11. (Previously Presented) The method claim 9, wherein the transmitting step comprises:

converting the combined monitoring and RF signals into an optical signal; and
transmitting the optical signal to the slave repeater via an optical fiber.

12. (Currently Amended) An optical repeater system, comprising:
a master repeater configured to receive an RF signal, generate a modulated reference signal, combine the RF signal with the modulated reference signal, and convert the mixed signal to an optical signal for transmission over an optical cable; and

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a slave repeater, configured to receive the optical signal from the optical cable, convert the optical signal to a received mixed signal, split the received mixed signal into a received RF signal and a received modulated signal, compare the received modulated signal to a reference value, and amplify the received RF signal according to a result of the comparison, wherein the modulated reference signal is generated independently from the RF signal.

13. (Previously Presented) The optical repeater system of claim 12, wherein the Master repeater comprises a modem to generate the modulated signal, and wherein the slave repeater comprises a modem to demodulate the received modulated signal.
